[illegible]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: February 7, 1961

X

Card 3/3

AUTHORS: Deych, M.E. (Cand. Tech. Sci.), Samoylovich, G.S. (Cand. Tech.Sci.), Troyanovskiy, B.M. (Cand. Tech. Sci.), Kazintsev, F.V. (Engineer) and Lipatnikov, S.N. (Eng.)

TITLE: Investigation of two-crown regulating stages in an experimental steam turbine. (Issledovaniye dvukhvenechnykh reguliruyushchikh stupeney v parovoy eksperimental'noy turbine).

PERIODICAL: "Teploenergetika" (Thermal Power), Vol.4, No.5, May,1957, pp.35-43 (U.S.S.R.)

ABSTRACT: Operating test results have shown that the regulating stages having two sets of blading on a single runner that are used by steam turbine factories are of low efficiency. Therefore, turbine designers try to avoid the use of such stages in high power turbines. However, [illegible] and steam consumptions. The explanations of the type of stage and of the experimental conditions are all expressed in terms of Soviet conventional notation which is assumed to be so familiar to the reader as to require no explanation. The experimental set-up is described, the available experimental turbine having the following limiting . . .;

Investigation of the two-crown regulating stages in an experimental steam turbine. (Cont.)

conditions: maximum power 600 kW, maximum speed 12 000 r.p.m.; initial pressure 1 to 5 atm.; maximum initial temperature 150 to 300°C and exhaust pressure 0.1 to 2 atm. The turbine is loaded by a hydraulic brake. The main geometrical characteristic of the stages tested are described with full information about blade profiles and dimensions. The results of the tests are presented in the form of graphs of the internal and blade efficiencies.

The experiments carried out were of a preliminary nature. For a number of operational reasons unstable conditions were obtained with a deep vacuum beyond the stage and it was, therefore, impossible to obtain a reliable efficiency value for certain conditions and particularly for low Reynolds numbers. Moreover, the relative error of the experiment is higher with deep vacuums because the power of the stage is less. However, the test results are of interest in that they give a qualitative picture of the relationship between efficiency and Reynolds number. Graphs illustrating this point are given. Information is also given about changes in the reaction under different conditions and the results of investigations on the stages with partial supply of steam. Some results are also given on a

(cont.)
Investigation of the two-crown regulating stages in an experimental steam turbine. (Cont.)

detailed investigation of the structure of flow in the stages, including graphs of pressure distribution over the profile of the blading.

It is concluded that stage type KS-1A is of high efficiency over a fairly wide range of conditions. With partial supply of steam the blade and internal efficiencies of the stage are reduced. Protective housings and longitudinal glands on the boundaries of the arc of steam supply should be installed to reduce windage losses. General agreement was found between the pressure distributions over the profile determined under static conditions and by calculations. There is reason to think that similarity of pressure fields is observed during tests using steam and air. 11 figures, 1 literature reference (Russian).

Card 3/3

LIPATNIKOVA, A. V.

Kovshova, Ye, A., Lipatnikova, A. V., and Zhelnova, G. G. "On the sanitary conditions of the barbershops of the city of Ufa," Voprosy dermato-venerologii, Vol. IV, 1948, p. 13-15.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

LIPATNIKOVA, M.F.

1st Conference on the Control of Helminthiases in Bryansk Province. Med. paraz. i paraz. bol. 33 no.6:755 N-D '64. (MIRA 18:6)

L 1611-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD

ACCESSION NR: AP5021665 UR/0080/65/038/008/1736/1740

AUTHOR: Titova, I. Ye.; Lipatnikova, V.

TITLE: Study of some factors affecting the properties of a hydrochloric acid solution used for etching titanium alloys

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 8, 1965, 1736-1740

TOPIC TAGS: titanium alloy, nonaqueous solution, hydrochloric acid, sodium compound, fluoride, metal etching

ABSTRACT: For etching low titanium alloys, a solution containing 6 wt% hydrochloric acid and 5 wt% sodium fluoride is generally used. The object of the present work is to explain the reason for the rapid loss of activity of this solution and to point the way to its more rational use. Tests were carried out by the weight method on oxidized titanium samples previously heated in a furnace for 30 min at 540 C. It was established that an etching solution containing 21.3 gram/liter of titanium lost its activity in 60 hours, while the rate of solution of titanium

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L 1611-66

ACCESSION NR: AP5021665

in the solution fell by approximately 1000 times. For a solution containing 13-19 gram/liter, loss of activity was observed only after 120-130 hours. Loss of activity of the etching solution is accompanied by a marked shift of the electrode potential to the positive side. Study of the activity of an etching solution in a reducing medium, produced either with hydrogen or by addition of Na_2SO_3 to the solution, showed no difference from its activity in air. It was found that addition of small amounts of titanium chlorides ($TiCl_3$ or $TiCl_4$) significantly redistributes the activity of the etching solution. It is concluded that loss of activity is not connected with oxidation of the solution. Orig. art. has: 1 figure and 1 table

ASSOCIATION: Ural'skii gosudarstvennyi universitet (Ural State University) 44,55

SUBMITTED: 20Dec63 ENCL: 00 SUB CODE: GC, MM

NR REF SOV: 003 OTHER: 000

Card 2/2

LIPATNIKOVA, Ye.A.

Methodology of the long-range forecasting of the freezing and opening of the Aral Sea. Trudy TSIP no.142:25-27 '65. (MIRA 18:10)

L 43062-66 EWT(1) GW (N)
ACC NR: AT6006570 SOURCE CODE: UR/2546/65/000/142/0025/0027

AUTHOR: Lipatnikova, Ye. A.

ORG: none

TITLE: A method for long range forecasting of freezing and ice breakup in the Aral Sea

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 142, 1965. Morskiye prognozy i raschety (Marine forecasts and calculations); materialy Vsesoyuznogo soveshchaniya, noyabr' 1963 g., 25-27

TOPIC TAGS: long range weather forecasting, sea ice, atmospheric circulation, atmospheric temperature

ABSTRACT: A forecasting method based on the study of freezing and ice breakup as a function of atmospheric circulation and air temperature was investigated. Baric fields were evaluated at the Sary-Chaganak Bay and the Aral Sea station, using Chebyshev polynomial equations and the mean baric indices developed by N. A. Belinskiy. Two equations for freeze forecasting in the Bay were derived:

$$z = 2.43\,\Delta t_x - 7.16\,A_{01} + 34.26; \quad z = 6.48\,A_{01} - 0.08\,\Delta I_x + 33.90,$$

where z is the data of freezing, Δt_x is the monthly air temperature anomaly at Aral'sk

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L 43062-66

ACC NR: AT6006570 O

for October, A_{01} is the expansion coefficient, and ΔI_x is the October circulation anomaly. An equation for forecasting ice breakup in the Sary-Chaganak Bay was derived as

$$z=0.46x + 0.57y + 15.8,$$

where z is the ice breakup data, x is the sum of the negative mean monthly air temperature at the Aral Sea station, and y is the data of temperature change. Orig. art. has: 2 figures, 3 formulas.

SUB CODE: 04,08/ SUBM DATE: none

Card 2/2 hs

23744
S/107/61/000/008/001/004
D227/D305

9,6000

AUTHOR: Paderno, I., Lipatov, A. and Gavril'chik, V. (Leningrad)

TITLE: A flame-registering device. An electronic device detects the flame of a burning match under any conditions--in darkness or in bright sunlight

PERIODICAL: Radio, no. 8, 1961, 27-28

TEXT: Normal pickups for registering flame can be affected by extraneous factors such as a chance increase in illumination or a rise in temperature. Practice shows that the most characteristic criterion of an open flame is the pulsation of its infrared and ultraviolet emission. An experimental check of the mean pulsation frequency of various types of combustible materials showed that it seldom exceeds 30-35 cycles. The most probable mean pulsation frequency (in 75% of the cases) lies within the 10-25 cycle range. The flame-registering device dealt with in the article consists of a sensitive pickup, a band amplifier, a rectifier and an output relay. ФС-А1 (FS-A1) photoelectric resistances were used

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as pickups, the number required being determined by local conditions. The rated dark resistance of the pickup is not more than 150 kohm. Its spectral characteristics have a sensitivity maximum at 2.1μ which means that the device has sufficient sensitivity even for a flame of relatively low temperature. An experimental check showed that photoelectric resistances of this type were suitable for flame pickups registering very small changes in illumination. The band amplifier (a circuit diagram is given) has quite high sensitivity (about 20-26μv) with low internal noise (about 1-2μv) and specific frequency characteristics, thanks to the band filter. Sensitivity is sufficient to detect a burning match at a distance of 5-6 meters. The device does not respond to other sources of light or infrared emission. The amplifier consists of an amplifier proper and a former device. The negative feedback circuit boosts the frequency characteristics at 15 cycles and gives a marked amplification drop in the frequency range about 70 cycles. Total amplification at frequencies of 16-17 cycles is more than 90 db. The rectifying bridge is built of semiconductor diodes and the output relay is of the polarization type. The flame register can be powered from either d.c. sources or the a.c. grid. It was assembled

A flame-registering device...

as a separate unit 200 x 200 x 300 mm in size, although these dimensions could be reduced considerable by the use of miniature components and their more efficient positioning. In sensitivity tests with a normal spirit lamp the set registered steadily at an equivalent illumination power of 0.02 lux. Sensitivity could be increased by using optical lenses and mirrors to concentrate more of the flame's emission. The set's sensitivity is determined only by factors governing the flame and is practically unconnected with illumination caused by other sources of emission. Other advantages are its inertialessness, small dimensions and low power consumption. The device is suitable for signalling in fire-prevention apparatus, for detecting flame in unprotected premises and for tripping various automatic systems.
There are 4 figures.

Card 3/3

LIPATOV, A. F.

LIPATOV, A. F. -- "Investigation of the Strength of Concrete Pipe Elements of Bridge Structures." Cand Tech Sci, Central Sci Res Inst of Industrial Structures (TsNIPS), Moscow 1953. (Referativnyy Zhurnal--Mekhanika, Jan 54)

SO: SUM 168, 22 July 1954

LIPATOV, A.F., kandidat tekhnicheskikh nauk.

Investigation of the strength of concrete pipe structural elements. Trudy TSNIIS no.19:251-298 '56. (MLRA 9:11)
(Pipe, Concrete)

KARPINSKIY, V.I., inzh.; LIPATOV, A.F., kand. tekhn. nauk, nauchnyy red.; NEKLEPAYEVA, Z.A., inzh., red.; SUYETIN, G.A., tekhn. red.

[Concrete in a prestressed reinforced spiral band] Beton v predvaritel'no napriazhennoi spiral'noi oboime. Moskva, Orgtransstroi, 1961. 182 p. (MIRA 15:3)
(Prestressed concrete construction)

SOV/123-59-15-59362

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 72 (USSR)

AUTHORS: Lipatov, A.P., Nislovskikh, V.M.

TITLE: Mechanization of Auxiliary Operations of Plate Mills

PERIODICAL: Sb. statey. Ural'skiy z-d tyazh. mashinostr. im. S. Ordzhonikidze, 1958, Nr 1, pp 156 - 165

ABSTRACT: Designs of marking machines, branding devices and plate stacking devices are described, which were manufactured at the Uralmashzavod and installed at one of the 2800 plate mills. The machine for the marking of plates represents a driving trolley, travelling on rails which are located parallel to the table on which the marking is effected. A welded cantilever, carrying special tanks for the lime mortar with which the lines are made on the plate, is fastened on the trolley perpendicular to the axis of the table. The working organ of the plate branding device is a pneumatic cylinder, fitted on pivots in roller bearings; the box with the branding irons is fitted in a T-shaped groove at the end of the cylinder rod. The shield of the disappearing support has a special jut, which serves as bearing surface for the plates during the

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Mechanization of Auxiliary Operations of Plate Mills

branding operation. The plate stacking device is mounted on the frame of the table and consists of the drive, transmission shaft, driving and idle racks with rolls and pockets. The separate sections of the racks are fastened to a girder with their rear ends and with their front ends they rest on rollers, fitted on the transmission shafts.

M.G.N.

LIPATOV, A.P., inzh.; BYKOV, L.A.

New design of a shifting disappearing thrust. Konstr.krup.mash. no.1:67-72 '62. (MIRA 16:2)

(Rolling mills)

LIPATOV, D. N.

"Investigation of Converter Circuits for Frequency Regulation of the Speed of Induction Motors With a Fan Load on the Shaft." Sub 13 Apr 51, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

Lipatov, D. N.

2

621.314.263 ; 621.313.33

4558. Some problems of the operation of converting plant incorporating an asynchronous frequency converter. D. N. LIPATOV. *Elektrichestvo*, 1954, *No.* 5, 30-6.

Some possible variants of the operation of an asynchronous machine used as a frequency convertor are considered. Energy relations and power ratings of machines for frequency-converting plants are determined, considering special uses, e.g. in connection with fast-running drives by squirrel-cage motors, speed-controlled by frequency variation and with a fan torque on the shaft. An equivalent circuit of such a plant is presented and its mechanical and electrical characteristics, including stability conditions, are discussed. The use of asynchronous frequency convertors is more suitable particularly for plants of high power ratings (1–15 MW) than that of synchronous convertors, especially where slow-running d.c. machines must be used.

B. 7. KRAUS

B7

Moscow Power Engr. Inst. im Molotov

KUBAYEVA, Antonina Petrovna; LIPATOV, Dmitriy Nikitich; GOLOVAN, A.T., redaktor; SAPAROVA, A.L., redaktor; SAVCHENKOV, I.M., tekhnicheskiy redaktor

[Collection of problems in the fundamentals of electric drive] Sbornik zadach po osnovam elektroprivoda. Pod red. A.T.Golovana. Moskva, Gos. energ. izd-vo, 1955. 170 p. (MLRA 8:7)
(Electric driving)

LIPATOV, D.N.

AID P - 1454

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 5/36

Authors : Golovan, A. T., Doc. Tech. Sci., Prof., Yakovlev, V. I., and Lipatov, D. N., Kands. of Tech. Sci., Moscow

Title : Experimental analysis of electric drives of single-bucket excavators

Periodical : Elektrichestvo, 2, 22-27, F 1955

Abstract : The Soviet construction industry employs a great number of excavators with a bucket capacity from 0.25 up to 20 cu m. The Moscow Power Institute conducted a series of experiments and studies in the years 1949-1954 in order to determine the most expedient electric gear for excavators of medium capacity. Three types of drives were studied: an a-c drive with rheostat control, a d-c drive consisting of a generator-motor with a complex field excitation, and the same scheme with an amplidyne. The tests of excavators

AID P - 1454

Elektrichestvo, 2, 22-27, F 1955

Card 2/2 Pub. 27 - 5/36

employed in the construction of the Volga-Don Canal disclosed several deficiencies. The authors propose a series of improvements to be applied. 13 diagrams.

Institution: Moscow Power Institute im. Molotov

Submitted : N 29, 1954

LIPATOV, D., kandidat tekhnicheskikh nauk; BURMIN, L., inzhener; GURARI, N., inzhener.

Electric shaft drive for conveyer system. Mias.ind.SSSR 26 no.6:16-20 '55. (Conveying machinery) (MLRA 9:2)

SOKOLOV, Mikhail Mikhaylovich; LIPATOV, Dmitriy Nikitich; SHINYANSKIY, A.V., red.

[Electric drives and electric power supply of industrial enterprises] Elektroprivod i elektrosnabzhenie promyshlennykh predpriiatii. Moskva, Energiia, 1965. 440 p. (MIRA 18:8)

LIPKIN, G. I. Cand Veterin Sci

Dissertation: "Investigation of Leather Raw Materials by the Reaction of Precipitation." Moscow Zooveterinary Inst, 19 Sep 47.

SO: Vechernyaya Moskva, Sep, 1947 (Project #17136)

LIPATOV, I. (g.Gor'kiy); TSARSKIY, S. (g.Gor'kiy)

A fulfilled plan does not cover up for carelessness. Okhr. truda i sots.strakh. 3 no.2:47-49 F '60. (MIRA 13:6)

(Gorkiy Province--Lumbering--Safety measures)

LIPATOV, I. S.; PROSLEAKOVA, N. F. [Proshlyakova, N. F.]

Modern concepts on the gelification in polymer solutions, and on the gel structure.

(Gelation) (Colloids) (Polymers and polymerization)

LIPATOV, K.G.

Lipatov, K.G. "On the motion of water in a bend in open flows", Doklady Vsesoyus, akad, s.-kh. nauk im. Lenina, 1949, Issue 1, p. 39-48, -Bibliog: 10 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

LIPATOV, K. G.

"The Value for the Vertical Component of the Rate in a Steady Current and Small-Scale Model Alluvium Suspensions," Dok. v-s. Selkhoz Nauk., No. 8, 1949, Cand. Agri. Sci. All-Union Acad. Agri. Sci. im. V. I. Lenin, -cl949-.

LIPATOV, K.G.

Irrigation Farming

Conference on problems in utilizing irrigated lands. Dost. sel'khoz. no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

KOSTYAKOV, A.N. [deceased], red.; LIPATOV, K.G., red.; SOKOLOV, G.A., red.; ORLOVA, V.P., red.; ZUBRILINA, Z.P., tekhn. red.

[Improvement and agricultural use of bottom lands] Melioratsiia i sel'skokhoziaistvennoe ispol'zovanie poimennykh zemel'. Pod red. A.N. Kostiakova i K.G. Lipatova. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 163 p. (MIRA 11:10)

1. Vsesoiuznaya Akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina. Sektsiya gidrotekhniki i melioratsii.
(Alluvial lands)

LIPATOV, K. G.

99-5-10/11

AUTHOR: Lipatov, K.G., Candidate of Agricultural Sciences

TITLE: Department of Hydraulic Engineering and Melioration of the All-Union Academy of Agricultural Sciences Imeni V.I. Lenina (V Otdelenii gidrotekhniki i meliora tsii Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina)

PERIODICAL: Gidrotekhnika i Melioratsiya, 1957, # 5, p 60-62 (USSR)

ABSTRACT: The department of Hydraulic Engineering and Melioration of the "VASKhNIL", together with a section of the same name, were founded by the Ministry of Agriculture of the USSR on Apr 16, 1956. The presidium of the academy appointed the following as members of the department: Academicians A.N. Askochenskiy, A.N. Kostyakov, I.A. Sharov, and E.A. Zamarin; member-correspondents V.V. Poslavskiy, B.A. Shumakov, N.A. Yanishevskiy and A.M. Tsarevskiy, and scientific secretary K.G. Lipatov. At the plenary session of the department held in August 1956, 14 scientific research institutes were informed of the programs for the 6th five-year plan in which the following problems were embodied:

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99-5-10/11

Department of Hydraulic Engineering and Melioration of the All-Union Academy of Agricultural Sciences Imeni V.I. Lenina

1. Methods for draining swamps and wet mineral soils.
2. Designing of new, and improving existing irrigation systems and installations.
3. Fundamental questions of planning, construction and operation of irrigation systems and installations.
4. Drought control by means of melioration.
5. Mechanization of melioration works.

ASSOCIATION: "VASKhNIL"

AVAILABLE: Library of Congress

Card 2/2

LIPATOV, K.G.

99-58-5-9/10

AUTHOR: Lipatov, K.G., Candidate of Agricultural Sciences

TITLE: Extended Plenum of the Section in Hydraulic Engineering and Melioration of VASKhNIL. (Rasshirennyy plenum otdeleniya gidrotekhniki i melioratsii VASKhNIL)

PERIODICAL: Gidrotekhnika i Melioratsiya, 1958, # 5, pp 58-63 (USSR)

ABSTRACT: This conference of the section in hydraulic engineering and melioration of the Vsesoyuznaya Akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenin (All-Union Academy of Agricultural Sciences imeni V.I. Lenin) was convened on January 24-27, 1958. The convention was attended by academicians, member-correspondents, and scientists from hydraulic scientific research and educational institutes, and representatives of industrial organizations. The following reports were presented: 1) On the work of the Section during 1957 - by the Academician A.N. Askochenskiy, Secretary of the Section; 2) Basic measures for the development of hydraulic engineering from 1959 till 1972 - by the Deputy Chief of Glavvodkhoz of the Ministry of Agriculture of USSR K.K. Shubladze; 3) General plan of scientific-research work in hydraulic-

Extended Plenum of the Section in Hydraulic Engineering and Melioration of VASKhNIL

engineering and melioration for 1958 - by Professor Shaumyan and 4) Announcements of departmental directors of hydraulic engineering and melioration research institutes on the execution of the 1957 projects and the plans for 1958.

AVAILABLE: Library of Congress

Card 2/2 1. Water supplies-USSR 2. Agriculture-USSR 3. Irrigation systems-USSR

SOV/119-59-10-2/19

9(6)

AUTHOR: Lipatov, L. N., Engineer

TITLE: An Apparatus Designed for Determining the Dynamic Characteristics of Industrial Control Devices

PERIODICAL: Priborostroyeniye, 1959, Nr 10, pp 6-8 (USSR)

ABSTRACT: By way of introduction the author discusses the determination of the amplitude-frequency characteristics and phase-frequency characteristics of control devices. A harmonic oscillation is assumed at the input, and it is indicated that the amplitude and the phase shift of the amplified output oscillation depend on the properties of the control system and the frequency of the input voltage. For equilibrated control devices passing over to a new state of equilibrium due to a pulsed variation of the input quantity the author discusses the function that defines the transient. Control devices with square-wave oscillations are then dealt with. The mathematical dependence of the aforementioned function, frequency characteristics, ascending curve, and pulse-transient function is investigated. Herefrom it follows that the knowledge of the amplitude-phase characteristics of the control device or its transients is sufficient for a determination of its dynamic

Card 1/2

characteristics. The apparatus designed by the Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii (Central Scientific Research Institute for Full Automation) is discussed in detail. It operates with special electric and pneumatic measuring devices at the outputs of which usually direct-current voltages of up to 5 mv are generated. The electric measuring device has an error of 1%, and when it is connected in series with the pneumatic block, the limit is 2%. The apparatus is highly insensitive to voltage- or frequency variations. There are 2 figures and 4 Soviet references.

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S/119/60/000/02/003/015
B014/B014

28 (1)
AUTHOR: Lipatov, L. N., Engineer

TITLE: On the Applications of the Electronic Devices RU5-01(02)

PERIODICAL: Priborostroyeniye, 1960, Nr 2, pp 9 - 10 (USSR)

ABSTRACT: The electronic programing controller of the type RU5-01 is designed for controlling various parameters under a preset program. It operates with automatic measuring instruments of the types EPP, EMP, EPD, etc. The electronic master programing controller of the type RU5-02 is suited for controlling various parameters under a preset program and operates in units together with instruments of the types RU4-06, RU4-15, RU4-16, and with the above-mentioned automatic measuring instruments. The first-mentioned controller consists of a follow-up system, a bridge circuit, and a position controller. The second-mentioned controller also consists of a follow-up system and a bridge circuit. RU5 controllers are characterized by a follow-up system in which the preset program is controlled by means of a photocell installed in the bridge. The instruments of this type used at present allow to record measured values on paper or

Card 1/2

On the Applications of the Electronic Devices (cont.) S/119/60/000/02/003/015
RU5-01(02) B014/B014

magnetic tapes. Improvement of these devices will possibly allow to apply them in statistical analysis for which purpose investigations are being carried out by Massachusetts Institute of Technology, Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics of the AS USSR), and Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii (Central Scientific Research Institute of Comprehensive Automation). It is said that the low velocity of the follow-up system and the magnetic tape is a great drawback of these instruments. The diagram illustrated in figure 2 shows a circuit with improved dynamic characteristics. There are 2 figures.

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86652

S/119/60/000/011/008/009
B012/B054

6,9210

AUTHORS: Leonov, Yu. P. and Lipatov, L. N.

TITLE: Apparatus for the Statistical Investigation of Dynamic Characteristics of Industrial Objects in the Presence of Noise

PERIODICAL: Priborostroyeniye, 1960, No. 11, pp. 20 - 22

TEXT: The authors describe an apparatus for the statistical study of dynamic characteristics of objects in the presence of noise, and for analyzing random processes with ultrasonic frequency. The device may also be used to estimate the statistical characteristics of random processes (expected values, correlation functions, dispersions), and to calculate Fourier coefficients, spectral-density functions, frequency characteristics of objects in the presence of noise, and parameters of weight functions. The method of estimating by means of this device was described by the authors in their paper (Ref., footnote p.20). Fig. 1 shows the functional scheme of the apparatus, Fig. 2 its total view. The apparatus consists of two blocks. The first block comprises the servosystems, the chart mechanism, and the multiplication potentiometers. Fig. 3 shows

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Apparatus for the Statistical Investigation of Dynamic Characteristics of Industrial Objects in the Presence of Noise

S/119/60/000/011/008/009
B012/B054

the basic circuit diagram of this block. The servosystem is operated by a photoelectric head which follows the curve drawn on a tape. To increase the stability of the follow-up system, a correction quadripole R_3, R_4, R_5, C_1, C_2, C_3 is installed at the input of the double triode $Л_2$ (L_2). An additional amplifying stage is installed to maintain the total amplification factor of the follow-up system. The second block comprises two voltage stabilizers with semiconductors and a reference diode (Fig.4), two phase-sensitive power amplifiers with semiconductors (Fig. 5), two integration motors with revolution indicators, and a control panel. The technical data of the apparatus are given. A test of the apparatus showed that the integration accuracy is at least 4%, and the difference between the experimental and calculated correlation function is at most 4%. A shortcoming is the comparatively long time for conducting the analytical work. There are 7 figures and 1 Soviet reference.

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B012/B054

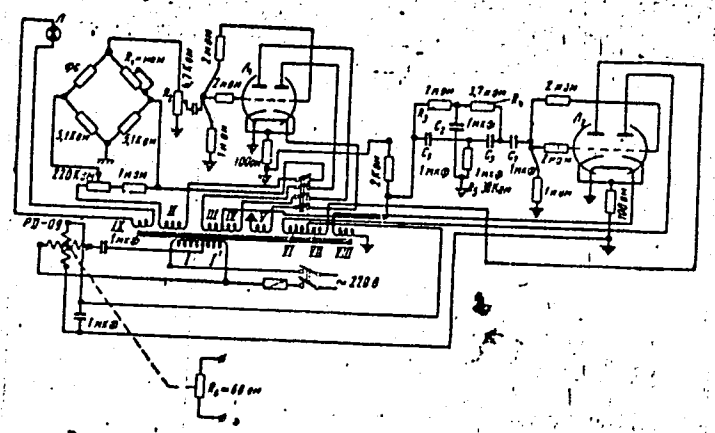

Рис. 3. Принципиальная схема следящей системы:
$Л_1$ — 6Н6П; $Л_2$ — 6Н1П.

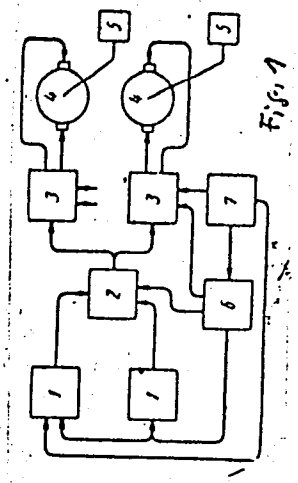

Fig. 1

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B012/B054

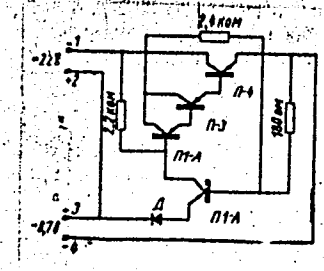

Рис. 4. Принципиальная схема стабилизатора напряжения.

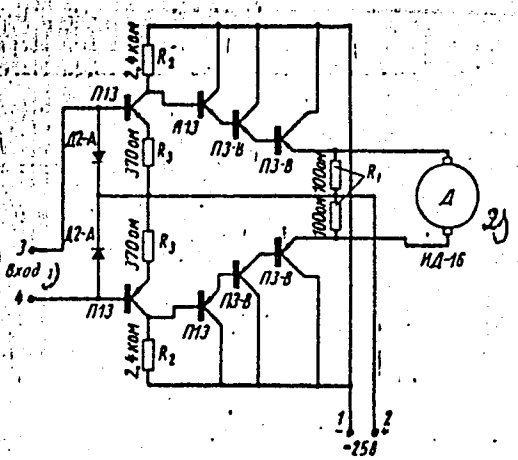

Рис. 5. Принципиальная схема усилителя мощности.

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77823
SOV/103-21-2-3/14

AUTHORS: Leonov, Yu. P., Lipatov, L.N.

TITLE: Statistical Methods of Determining Dynamic Characteristics of Industrial Objects in the Presence of Noises, and Analysis of Random Processes at Infra-Low Frequencies

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 2, pp 180-190 (USSR)

ABSTRACT: The paper describes a computer which performs the following type of operation with functions x(t), y(t):

$$R_{yx}(\tau, T) = \frac{1}{T}\int_0^T x(t)\, y(t-\tau)\, dt. \qquad (1)$$

This computer is suitable for automatic computation of the following magnitudes: (1) Estimation of correlation functions and variances. The expression

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defined by Eq. (1) is an estimation of the mutual correlation function of two random processes X(t) and Y(t). This estimation converges into a real correlation function for $T \longrightarrow \infty$. Assuming X(t) = Y(t), the estimation of the correlation function of the process X(t) is obtained. Assuming further $\tau = 0$, the computation result is an estimation of the variance. (2) Coefficients of Fourier series. The coefficients of Fourier series of any function x(t) may be obtained by selecting in Eq. (1) the following relationships: y(t) = $\cos \omega_k t$ and $\tau = 0$. (3) Estimation of the function of spectral density. When x(t) is a representation of a stationary random process X(t), the computation of the spectral density at the point ω_k is based on Eq. (1), and it may be written as:

$$M[a_k^2] = \frac{2}{T}\int_0^T R_{xx}(\tau)\cos\omega_k\tau\,d\tau + 0\left(\frac{1}{T^2}\right) \quad (2)$$

$$a_k = \frac{2}{T}\int_0^T x(t)\cos\omega_k t\,dt. \quad (3)$$

When the interval (0, T) is sufficiently large, then

$$M[a_k^2] = \frac{\pi}{T}G_{xx}(\omega_k) + 0\left(\frac{1}{T^2}\right), \quad (4)$$

where $G_{xx}(\omega_k)$ is the spectral density of the process $X(t)$ the magnitude of variances $M\left[a_k^2\right]$ is computed approximately, proceeding from a finite number of representations of the

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process X(t). (4) Estimation of frequency characteristics. In this case, three signals are considered:

$$f_1(t) = D\cos\omega t,$$
$$f_2(t) = B\sin(\omega t + \theta) + n(t)$$
$$f_3(t) = D\sin\omega t,$$

where $f_1(t)$ is the signal at input of the object; $f_2(t)$ is the signal at the output of the object consisting of the response $B\sin(\omega t + \theta)$ to $f_1(t)$, and of the noise n(t). It is shown that the value $A = B/D$ of the amplitude characteristic at the frequency ω and the value θ of the phase characteristic at the same frequency, may be expressed as:

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$$A = \frac{2}{D^2}\sqrt{R_{1,2}^2(0) + R_{3,2}^2(0)}, \quad \theta = \operatorname{arctg}\frac{R_{1,2}(0)}{R_{3,2}(0)}. \qquad (7)$$

where $R_{3,2}(0)$ and $R_{1,2}(0)$ are estimations of the correlation functions at $\tau = 0$. The setup for determining frequency characteristics is shown on Fig. 1. The follow-up system is continuously reading the representation $f_2(t)$ of the investigated process. Thus, generated signal is applied to potentiometers connected to the sine and cosine generator. The $f_2(t) \sin\omega t$ and $f_2(t) \cos\omega t$ are obtained and applied to the integrating motors. Counters on the motor shaft indicate the magnitudes

$R_{3,2}(0)$ and $R_{1,2}(0)$. (5) Estimation of parameters of weighting functions of linear systems. Objects considered are with monotone transient processes. In this case, the weighting function may be determined from its moments. The expression for the moment α_n of the n-th order is given as:

$$\alpha_n = \int_{-\infty}^{+\infty} t^n k(t)\,dt \quad (n = 0,1,\ldots). \tag{9}$$

where k(t) is the weighting function. It is shown that estimation of α_n may be obtained through estimation of moments a_n and b_n of the correlation functions, as indicated by Eqs. (24) and (25), respectively:

and

$$a_n = \int_{-\infty}^{+\infty} \tau^n R_{yx}(\tau)\, d\tau \qquad (24)$$

$$b_n = \int_{-\infty}^{+\infty} \tau^n R_{yy}(\tau)\, d\tau = 2\int_{0}^{\infty} \tau^n R_{yy}(\tau)\, d\tau \quad (n = 0, 2, 4, \ldots). \qquad (25)$$

The computer under consideration makes it possible to obtain the estimations of moments a_n and b_n.

A general description of the computer is given. Its functional diagram is shown on Fig. 3.

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Statistical Methods of Determining Dynamic Characteristics of Industrial Objects in the Presence of Noises, and Analysis of Random Processes at Infra-low Frequencies

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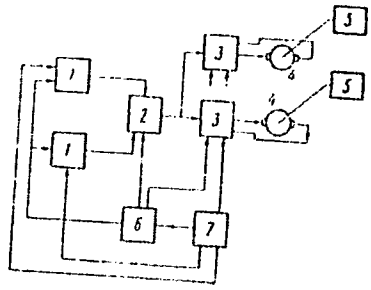

Fig. 3. (1) Reading arrangement (follow-up system); (2) multiplier; (3) power amplifier; (4) integrating motor; (5) shaft counter; (6) stabilized power supply; (7) regulation desk.

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Statistical Methods of Determining Dynamic Characteristics of Industrial Objects in the Presence of Noises, and Analysis of Random Processes at Infra-Low Frequencies

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The reading arrangement has a photosensitive head which follows the function representation recorded on paper tape. The use of paper tape is considered an advantage when analyzing industrial objects in the presence of magnetic fields and commutation effects. It is stated that the above computer is simple to operate and is very reliable. It is especially convenient for investigations of industrial objects. A disadvantage of the computer is the considerable time required for the analysis. There are 8 figures; and 5 references, 2 Soviet, 1 German, 2 U.S. The U.S. references are: Goodman, T. P., Hillsley, R., Continuous Measurement of Characteristics of Systems With Random Input, Trans. ASME, Nr 8, 1958; Russian translation of the book by J. H. Laning, Jr., R. H. Battin, Random Processes in Automatic Control, McGraw-Hill Co., 1956.

SUBMITTED: August 3, 1959

Card 9/10

Statistical Methods of Determining Dynamic Characteristics of Industrial Objects in the Presence of Noises, and Analysis of Random Processes at Infra-Low Frequencies

77823
SOV/103-21-2-3/14

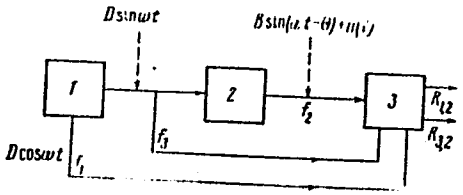

Fig. 1. (1) Sine and cosine generator; (2) object; (3) computer.

Card 10/10

LIPATOV, L.N. (Moskva); LEONOV, Yu.P. (Moskva)

Practical method for estimating the coupling operator in linear approximation [with summary in English]. Avtom. i telem. 22 no.5:561-570 My '61. (MIRA 14:6)
(Boilers) (Automatic control)

16.6700

S/103/62/023/008/004/006
D409/D301

AUTHOR: Lipatov, L.N. (Moscow)

TITLE: A practical method of determining the connecting operator of a class of random processes

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 8, 1962, 1058 - 1066

TEXT: The following two problems are considered: 1) To ascertain the presence of feedback in the controlled plant; 2) to evaluate the connecting operator of a class of non-stationary processes. Further, the connecting operator of the parameters of ethylene polymerization (by a technological process), is determined. Problem 1: A linear system with constant coefficients is considered. The weight function K(t) of the plant is determined; thereby it is first assumed that the system is open-loop, and then that it is closed-loop (i.e. feedback). In the first case one obtains the condition:

$$G_{xy_1}^{-}(\omega) \equiv G_{x}^{-}(\omega) , \qquad (3)$$

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A practical method ...

where G_{xy_1} denotes the correlated spectral density, and G_x - the spectral density of the input variable. This condition no longer holds in the second case; hence the fulfilment of condition (3) signifies the absence of feedback, and the non-fulfilment -- its presence. Problem 2: It is required to find the weight function K(t). This involves calculation of the correlation and cross-correlation functions of the open-loop system; thereby it is necessary to eliminate the mean $m_x(t)$ from the realizations of the random processes $x(t)$ and $y_1(t)$. This amounts to the filtration of the input signal X(t) by a low-frquency filter. The author uses as such a filter, the operation of the moving average (as given in the references). A formula is derived for the filter operator $A^k_{T_o}$, where T_o is the interval of the moving average. This operator is applied to the functions $x(t)$ and $y_1(t)$; k denotes the multiplicity of integration. With fixed k, the correlation - and cross-correlation functions depend on the parameter T_o. The error in calculating the weight function can be minimized by appropriate choice of T_o. These considerations are illustrated by a simple example for an experimental study of the process of ethylene polymerization, special appara-

Card 2/3

tus was developed by the TsNIIKA (Central Research Institute of Large-Scale Automation), in particular, pressure gauges (for 2500-3000 kg/cm^2) with pneumatic exit. The recording devices permitted registering up to 6 parameters, measured by any of the gauges. In order to determine the optimal value of T_o, several correlation- and cross-correlation functions were calculated; this involved the following steps: 1) Three correlation functions of the input variable (i.e. ethylene discharge), were calculated for 3 different values of T_o (68,112, and 158 seconds, respectively). 2) The cross-correlation functions (discharge and temperature) were calculated; the results are shown in figures. 3) The system was checked with regard to feedback; no feedback was observed. 4) The connecting operator was calculated by the method of moments (given in the references). The calculations showed that the value T_o = 112 seconds, yielded optimum results. There are 7 figures.

/B

SUBMITTED: January 30, 1962

Card 3/3

LIPATOV, L. N.

Dissertation defended at the Institute of Automation and Telemechanics for the academic degree of Candidate of Technical Sciences:

"Statistical Methods of Determining the Dynamic Characteristics of Industrial Objectives of Control."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

LIPATOV, L.N.

Determining the characteristics of nonlinear industrial systems for control purposes. Khim.prom. no.12:914-919 D '63. (MIRA 17:3)

LIPATOV, L.N.

Use of statistical methods for determining the dynamic characteristics of industrial objects. Trudy MIKHM 25:113-127 '63. (MIRA 17:6)

ACC NR: AR6035375 SOURCE CODE: UR/0271/66/000/009/B046/B047

AUTHOR: Duvanov, S. G.; Lipatov, L. N.

TITLE: Contribution to the calculation of the errors of analog-digital converters

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 9B361

REF. SOURCE: Sb. Avtomatiz. khim. i neftekhim. proiz-v. Vyp. 3. M., 1965, 19-31

TOPIC TAGS: analog digital converter, ~~computer component, computer design~~, random process

ABSTRACT: The authors investigate the level-quantization process that is realized in analog-digital converters. Formulas are derived for estimating the quantization errors for the case when the transformed system is a continuous random process. 5 illustrations. Bibliography, 7 titles. G. K.

SUB CODE: 09

Card 1/1 UDC: 681.142.621

ACC NR: AP7008892 SOURCE CODE: UR/0386/66/004/008/0321/0325

AUTHOR: Gorshkov, V. G.; Gribov, V. N.; Lipatov, L. N.; Frolov, G. V.

ORG: Physico-technical Institute imeni A. F. Ioffe, Academy of Sciences USSR (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Doubly logarithmic asymptotic behavior in quantum electrodynamics

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu, v. 4, no. 8, 1966, 321-325

TOPIC TAGS: asymptotic property, quantum electrodynamics

SUB CODE: 20,12

ABSTRACT: The article considers possible doubly logarithmic, asymptotic forms of Feynman diagrams in quantum electrodynamics. All processes are classified according to charge Z propagating in a t-channel intermediate state. The authors thank I. A. MALKIN, I. Ya. POMERANCHUK, and Ye. S. FRADKIN for their useful discussions. Orig. art. has: 3 figures and 4 formulas. [JPRS: 39,688]

Card 1/1

(Electricity in mining) (MLRA 13:4)

LIPATOV, M., inzhener.

Il-14M passenger plane. Grazhd.av.13 no.11:15-17 N '56. (MLRA 10:2)
(Airplanes)

84110
S/084/60/000/006/001/020
A104/A029

1,0000 1512

AUTHOR: Lipatov, M., Graduate Engineer

TITLE: Tu-124

PERIODICAL: Grazhdanskaya Aviatsiya, 1960, No. 6, Insert

TEXT: The article contains a brief description of the new turbojet Tu - 124 airliner designed by the Lenin Price Winner Academician A.N. Tupolev (photograph). The airliner is equipped with highly-economical two-circuit engines designed by P.A. Solov'yev and communicates on short and medium distances. Technical data are as follows: speed 900 kmph, maximum altitude 10,000 m, flying range 1,500 km, capacity 172 passangers, starting run 800 m which allows for take-offs on 1,500 m runways. The crew consists of the commander, co-pilot, navigator and a steward. The navigator's compartment is in the nose of the airliner and there is room for an instructor and the cockpit can accommodate a radiooperator. The front luggage compartment is about 2 m long and situated opposite the main entrance. The airliner has a modern kitchen and air conditioned and heated hermetic cabins. There is 1 photograph and 1 figure.

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 3, pp 51 - 54 (USSR)

ABSTRACT: $CaCl_2$ and NaCl brines used in industrial refrigerating installations have an aggressive action towards metals; consequently they are subject to rapid contamination by corrosive products. Investigations of NaCl and $CaCl_2$ brines taken from two different refrigerating plants revealed the presence of hydrates of ferric oxide and ferric chloride. The shapes and dimensions of insoluble particles of corrosion-products are shown in Microphoto 1 and Table 1. On the basis of the information gathered on impurities due to the corrosion of metal, the possibility was investigated of purifying brine by centrifugal action. For this purpose an ordinary milk centrifuge was used after adequate changes had been made in the drum. The article describes the purifying process with the reconstructed drum. The results of the centrifuging of brine are shown in Table 3. In all tests the ferric content of the brine was reduced 8 - 10 times. During

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SOV/66-59-3-12/31

The Purification of Brine in Refrigerating Installations, by the Centrifugal Elimination of Corrosion Products

The centrifugal presses the corrosion products formed a sediment on the plates of the drum, which therefore required to be cleaned from time to time. The period of continuous operation of the centrifugal separator [illegible]

Card 2/2

IPATOV, N.

28466Traktoristy (makarbyev, Mts. Lyskov, rayon gorbk. Obl. Ochyerki) Volzhskiy albmanakh, No. 7, 1949, S. 267-83 Z. Pochvovyedyeniye agrokhimiya I udobryeniya. Myelioratsiya. (Lyesomyelioratsiya. I polyezashchitnyye lyesnyye polosy-Sm. XVII, 5 Zh. Postanovlyeniye sovyeta ministrov SSSR I tsk vkp (B) o planye polyezashchitnykh nasazhdyeniy I komplyeksnyye matyerialy - Sm. XVII, 1)

SO: LETOPIS No. 34

LIPATOV, N.

Establishing intradepartmental financial control and auditing of documents on railroads. Bukhg. uchet 15 no.5:57-59 My '58. (MIRA 11:5)

1. Glavnyy bukhgalter Omskoy zheleznoy dorogi.
(Railroads--Accounts, bookkeeping, etc.)

LUGININ, Aleksandr Afanas'yevich; LIPATOV, Nikolay Akimovich; DURKIN, N.I., red.; BRULIKOVSKAYA, R.G., tekhn.red.

[City of Gorkiy] Gorod Gor'kii. Gor'kovskoe knizhnoe izd-vo, 1958. 197 p. (MIRA 12:4)
(Gorkiy--Description)

LIPATOV, Nikolay Akimovich; MYAGKOV, M.M., red.; RAKOV, S.I., tekhn.red.

[The workers participate in industrial management] Rabochie uchastvuiut v upravlenii proizvodstvom. Moskva, Izd-vo VTsSPS, Profizdat, 1959. 75 p. (MIRA 13:4)
(Gorkiy--Automobile industry) (Industrial management)

NOVOSEL'TSEV, P.I.; TYURIN, A.F.; LIPATOV, N.A., red.; SERGEYEVA, M.I., tekhn. red.

[Collective farm economics] Nekotorye voprosy ekonomiki kolkhozov; sbornik statei. Gor'kii, Gor'kovskoe knizhnoe izd-vo, 1961. 105 p. (MIRA 14:8)

(Gorkiy Province—Collective farms—Finance)

AGAFONOV, S.L.; ALEKSEYEVA, A.N.; BELLYUSTINA, L.N.; GOLOV, I.I.; GUSEV, O.V.; DMITRIYEVA, V.I.; YEVLAMPIYEVA, F.A.; YELISEYEV, A.I.; ZHAVORONKOV, N.A.; ZHARKOV, S.A.; KIR'YANOV, I.A.; KRAYNOV, L.A.; KUSTOV, K.L.; LBOV, F.A.; LIPATOV, N.A.; LIPOVETSKIY, I.A.; MALYUGIN, V.N.; MARINOV, N.N.[deceased]; MIKHAYLOV, A.N.; POTAPOVA,Ye.D.; TRUKHMANOV, G.A.; UKHIN, V.A.; FILIPPOV, V.A.; CHEBURASHKIN, A.M.; SHKOTOV, A.T.; GARANINA, L.F., kand. fil. nauk

[The city of Gorkiy; a guidebook] Gorod Gor'kii, Volgo-Viatskoe knizhnoe izd-vo, 1964. 374 p. (MIRA 17:12)

12

CA

One of the production schemes of buttermaking plants. V. Surkov, N. Lipatov, and B. Klimenko (Moscow Meat Ind. Chem.-Technol. Inst.). *Molochnaya Prom.* 12, No. 8, 16–18(1951).—The process proposed by Luk'yanov and Shakhov (*ibid.* 11, No. 10, 4–14(1950)) is shown to be unsatisfactory in plant practice owing to the losses suffered in the fat content and the overall butter yield, although it offers savings in utilization of machinery and equipment.
G. M. Kosolapoff

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

1. LIPATOV, N.; KLIMENKO, B.

2. USSR (600)

4. Dairying

7. More about adopting M-4 and M-4a plans. Open letter to Comrade Luk'yanov. Molochiprom., 14, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. LIPATOV, N. Eng.
2. USSR (600)
4. Gravity Separators
7. [illegible]

9. **Monthly List of Russian Accessions**, Library of Congress, June 1953. Unclassified.

LIPATOV, N. N.

"Optimum Distances Between Plates in Milk Separators." Cand Tech Sci, Moscow Technological Inst of the Meat and Dairy Industry, Min Higher Education USSR, Moscow 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

LIPATOV, N.N., inzhener.

Remarks on the discussion of milk processing in the book "Technology of processing fats." Masl.-zhir.prom. 19 no.6:32-33 '54. (MLRA 7:10)
(Dairying--Apparatus and supplies)

LIPATOV, N.N.

Optimal distance between the disks of separator bowls. Sel'khoz-mashina no.3:10-14 Mr '55. (MLRA 8:4)
(Cream separators)

LIPATOV, N.

Splitting of the fat globules [in milk] during separation. N. I. Lipatov (Technol. Inst. Meat and Dairy Ind., Moscow). *Molochnaya Prom.* 17, No. 7, 30–1(1956).—Sepn. of milk at 10–20° affected but slightly the size distribution (I) of the fat globules, while at 45° and above the pasteurization of milk at 60–80° in a drum-type app. caused a pronounced splitting of the fat globules and thus a noticeable shift in I. The degree of splitting varied inversely with the fat content of cream at the 25–35% fat level. V. N. K.

KUZ'MENKO, Aleksandr Petrovich, dots., kand. tekhn. nauk; LIPATOV, N.N., kand. tekhn. nauk, spets. red.; SEMENOVA, N.L., red.; GOTLIB, M.M., tekhn. red.

[Automatic control equipment for the meat and dairy industry] [illegible]

SURKOV, Viktor Danilovich, prof.; LIPATOV, Nikolay Nikitovich, dotsent; VASIL'YEV, P.V., inzh., retsenzent; BARANOVSKIY, N.V., kand. tekhn.red., retsenzent, spetsred.; IVANOVA, N.M., red.; GOTLIB, E.M., tekhn.red.

[Equipment of dairy plants] Oborudovanie molochnykh zavodov. Moskva, Pishchepromizdat, 1958. 437 p. (MIRA 13:1)
(Dairy plants--Equipment and supplies)

[Separation of milk] Separirovanie moloka. Moskva, Pishchepromizdat, 1960. 254 p. (MIRA 15:1)
(Milk)

LIPATOV, N.N.

Flow of a suspension in the drum of a plate-type separator.
Izv.vys.uchob.zav.;khim. i khim.tekh. 3 no.3:540-545 '60.
(MIRA 14:9)

1. [illegible]

KUZNETSOV, Vladimir Ivanovich; LIPATOV, N.N., kand. tekhn. nauk, retsenzent; BARANOVSKIY, N.N., kand. tekhn. nauk, retsenzent; IVANOVA, N.M., red.; SOKOLOVA, I.A., tekhn. red.

[Bottle-washing and bottling machines for milk; adjustment, regulation and operation]Butylomoechnye i razlivochno-ukuporochnye mashiny dlia moloka; naladka, regulirovanie i ekspluatatsiia. Moskva, Pishchepromizdat, 1962. 166 p. (MIRA 15:8)

(Milk plants--Equipment and supplies)
(Bottling machinery) (Bottle washing)

[illegible] 320 p. (MIRA 15:8)
(Food industry--Equipment and supplies)
(Heat exchangers)

SURKOV, Viktor Danilovich, prof.; LIPATOV, Nikolay Nikitovich, dots.; BARANOVSKIY, Nikolay Vasil'yevich, kand. tekhn. nauk; Prinimal uchastiye SELIVANOV, N.I., dots., kand. tekhn. nauk; IVANOVA, N.M., red.; SOKOLOVA, I.A., tekhn. red.

[Technological equipment of dairy enterprises]Tekhnologicheskoe oborudovanie predpriiatii molochnoi promyshlennosti. Moskva, Pishchepromizdat, 1962. 576 p. (MIRA 15:8)
(Dairy plant equipment and supplies)

MAKOVOZOV, Mikhail Ionovich, doktor tekhn. nauk, prof.; KUK, G.A., zasl. deyatel' nauki i tekhniki RSFSR, doktor tekhn. nauk, prof., retsenzent; SHLIPCHENKO, Z.S., kand. tekhn. nauk, dots.; LIPATOV, N.N., kand.tekhn.nauk, red.; KARGANOV, V.G., inzh., red.; SOKOLOVA, G.F., tekhn. red.; VLADIMIROVA, L.A., tekhn. red.

[Hydraulics and hydraulic machinery] Gidravlika i gidravlicheskie mashiny. Moskva, Mashgiz, 1962. 427 p. (MIRA 15:8)
(Hydraulics) (Hydraulic machinery)

LIPATOV, Nikolay Nikitovich, kand. tekhn. nauk, dots.; KUZNETSOV, V.I., inzh., retsenzent; IVANOVA, N.M., red.; SATAROVA, A.M., tekhn. red.

[Manual on laboratory and practical work in a course of studies on the equipment of enterprises of the dairy industry]Rukovodstvo k laboratornym i prakticheskim zaniatiiam po kursu oborudovaniia predpriiatii molochnoi promyshlennosti. Moskva, Pishchepromizdat, 1962. 224 p. (MIRA 15:11)
(Dairy industry--Equipment and supplies)

LIPATOV, N.N.

Methods and instrument for taking fluid samples from the rotors of centrifuges and separators. Izv.vys.ucheb.zav.; pishch.tekh. no.4:164-156 '62. (MIRA 15:11)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti, kafedra tekhnologii moloka i molochnykh produktov.
(Milk--Analysis and examination)
(Separators (Machines))

LIPATOV, Nikolay Nikitovich, kand. tekhn. nauk, dots.; KUK, G.A., zasl. deyatel' nauki i tekhniki, prof., retsenzent; BARANOVSKIY, N.V., kand.tekhn. nauk, retsenzent; IVANOVA, N.M., red.; KISINA, Ye.I., tekhn. red.

[Graphic methods of analyzing the degree of dispersion of milk fat]Graficheskie metody kharakteristiki dispersnosti zhira moloka. Moskva, Pishchepromizdat, 1962. 39 p. (MIRA 16:3)
(Butterfat--Analysis and examination)

LIPATOV, N. N.

Experimental study of the distribution of the fat fraction in the milk separator drum. Izv. vys. ucheb. zav.; pishch. tekh. no.[illegible] '59. (MIRA 13:10)

[illegible]

[illegible]

LIPATOV, N.N.; LYSKOVTSOV, I.V., kand. tekhn. nauk, retsenzent; MAKAROVA, L.A., tekhn. red.

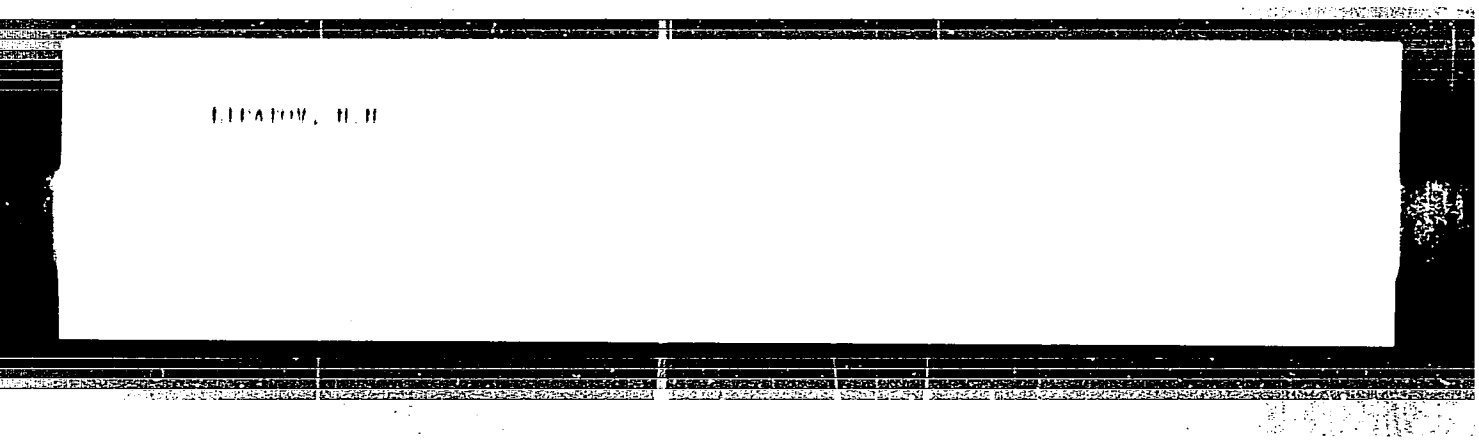
[Milk separators for the removal of impurities] Moloko-ochistiteli. Moskva, Mashgiz, 1963. 166 p. (MIRA 16:12)

(Separators (Machines))

[illegible], V.V., inzh., spets. red.; MAKAROVA, L.N., red.; SAZANOVA, A.M., tekhn. red.

[Circulation cleaning of dairy equipment] Tsirkuliatsionnaia moika molochnogo oborudovaniia. Moskva, Pishcheprom-izdat, 1963. 88 p. (MIRA 16:4)

(Dairy plants--Equipment and supplies)



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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000930020002-5"

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Properties of convergent streams between the plates of centrifuges. Izv. vys. ucheb. zav.; khim. i khim. tekh. 6 no.3:498-503 '63. (MIRA 16:8)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti, kafedra protsessov i apparatov pishchevykh proizvodstv.

(Centrifugation)

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[Investigation of the work processes and improvement of the design of milk separators] Issledovanie rabochikh protsessov i sovershenstvovanie konstruktsii molochnykh separatorov. Moskva, TSentr. in-t nauchno-tekhn. informatsii po avtomatizatsii i mashinostroeniiu, 1964. 71 p. (Seriia OS-XVII) (MIRA 17:12)

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Criticle conditions in radially conic tapered slotted flows.
Khim. i neft. mashinostr. no.6:26-27 D '64 (MIRA 18:2)

S/114/60/000/010/009/011/XX
E194/E155

AUTHORS: Aleynikov, G.I., Candidate of Technical Sciences, and Lipatov, N.N., Candidate of Technical Sciences

TITLE: An investigation of the efficiency of centrifuging in removing corrosion products from water

PERIODICAL: Energomashinostroyeniye, 1960, No.10, pp. 10-13

TEXT: It is important that the proportion of ferrous corrosion products in feed water should be low. As it is not always possible to prevent corrosion entirely, various methods have been devised for removing the corrosion products from water. Little information is available about the particle-size distribution in feed water and this makes it difficult to devise methods of purification. It is accordingly necessary to study the particle-size distribution of corrosion products in samples of water contaminated with various metals under various operating conditions. This article gives particle-size distribution characteristics of water from power equipment. It includes two main characteristics: the number of particles of corrosion products per unit volume of water, and the shape and size of the particles. To determine the

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number of disperse particles in water the microscope technique with special counting chambers was employed, and in particular the Goryayev counting chamber well-known in medical and biological practice was used. The work was done on return condensate from two Moscow TETs (Heat and Electric (District Heating) Power Stations), on water used to feed the experimental installations in the Kotel'naya laboratoriya MO TsKTI (Boiler-house laboratory of the Moscow Division of the Central Boiler and Turbine Institute), and on return condensate obtained from various industries (engineering, chemical and food). The pH value of the waters ranged from 6 to 7.5 and the range of salt content was wide. Iron was determined colorimetrically. Particle number counts are given in Table 1, in which the first line states the iron content mg/kg (ppm); the second line the number of particles; the third line the number of particles in 1 mg of iron. The shape, size and number of iron particles in water were also determined by microscope methods including mass microphotography. The main investigations were made with a magnification of 1350 and a scale unit on the ocular micrometer of 1.3 microns. All particles of less than half a scale unit were classed in the first group, those of half a scale unit

In the second group, and so on. The main results of the particle size distribution study are given in Table 2. It will be seen that in all the samples the majority of particles have a maximum dimension of up to 1.5 microns. Particles of this size and below comprise from 61 to 80% of the total number of particles. The particles are mainly in the form of plates and the ratio of the maximum dimension to the minimum ranges up to 4 [illegible]

[illegible] telling the extraction of iron is practically complete but that the degree of extraction falls off as the throughput is increased. To study this question the clarifier drum of the centrifuge was lined with paper and after stable running had been achieved a quantity of water contaminated with iron was passed through the centrifuge. The graph of Fig.3 shows the distribution of deposits

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